Prevalence of Depression and Anxiety Among Orthopaedic Surgeons and Identification of Barriers to Seeking Treatment

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INTRODUCTION:

Depression and anxiety affect up to 9% and 18% of the general population respectively and multiple articles have indicated that the prevalence among medical professionals is higher than the general population. Data on orthopaedic surgeons and in training surgeons is lacking. The purpose of this study is to identify the prevalence of anxiety and depression among practicing orthopaedic surgeons and residents in training. Additionally, to identify the factors limiting physicians from seeking treatment for mental health related conditions.

METHODS:

This study was conducted by survey using previously validated PHQ9 and GAD7 tools for measuring depression and anxiety respectively. Questions about demographic data, training level, prior mental health diagnosis and treatment and barriers to seeking mental health treatment were also included. An email detailing the purpose of this study along with the link to the REDCAP database was sent via the REDCAP's public survey distribution tool.

The survey was sent to each states orthopaedic society for distribution to its members and posted to The Association of Residency Coordinators in Orthopaedic Surgery (ARCOS) Online forum. Additionally, the survey was placed on the AOSSM member sponsored survey's webpage for members to complete.

The data collected was analyzed via ANVOA and appropriate post hoc testing with alpha level of <0.05.

RESULTS: There were 444 entries for the survey and after any entries with an incomplete data set were removed a total of 428 entries used for data analysis. Scores for the PHQ9 and GAD 7 were added based on the responses to the survey questions and categorized according to each assessment tools guide. The results for the PHQ9 were as follows: 235 (54.9%) providers with minimal, 125 (29.2%) with mild, 46 (10.7%) with moderate, 15 (3.5%) with moderately severe and 7 (1.6%) with severe depression. The results for the GAD7 were 252 (58.9%) providers with minimal, 104 (24.3%) with mild, 54 (12.6%) with moderate, and 18 (4.2%) with severe anxiety.

Statistical analysis demonstrated a significant difference in the PHQ9 between those still in training (scoring an average of 6.1) and those providers in practice > 10 years (scoring an average of 4.5), $P=0.008$. Looking at sex/gender, the average PHQ9 score for men was 4.2 and for women was 6.2 which was identified as significant with $p=0.00007$. The average GAD7 score for men was 4.1 and for women was 5.5 which was also found to be significantly different with $p=0.004$. Other demographic data was not found to have significant differences.

62 (14.5%) of surgeons have been diagnosed with anxiety, 76 (17.8%) have been diagnosed with depression, 4 (0.9%) had been diagnosed with OCD and 3 (0.7%) had been diagnosed with Bipolar Disorder. 19 (4.4%) of surgeons responded "other" with fill in responses including ADHD, Adjustment disorders, PTSD and eating disorders. 38 (8.9%) of people who responded had been diagnosed with more than one mental health diagnosis.

29 (6.8%) surgeons responded they had been treated with medication for their diagnosis. 27 (6.3%) surgeons reported they had been treated with therapy. 62 (14.5%) surgeons reported they had been treated with both medications and therapy. 36 (8.4%) surgeons responded they had not received any treatment.

The final question regarding barriers to treatment allowed multiple responses. 221 (51.6%) identified concerns over confidentiality as a barrier to getting treatment. 241 (56.3%) identified individual denial/minimization of problems as a reason for not seeking treatment. 32 (7.5%) responded that counseling or wellness is not available at their institution. 151 (35.3%) indicated that counseling is available but not during hours they are free. 234 (54.7%) reported concern for professional consequences as a reason for not seeking treatment for mental health diagnosis. 26 (6.1%) selected "other" and 47 (11.0%) stated there are no treatment barriers.

DISCUSSION AND CONCLUSION:

Our study indicates the prevalence of depression among orthopaedic surgeons of all levels is much higher than previously indicated. Our survey indicates that 45.1 % of orthopaedic surgeons who responded had some level of depressive symptoms ranging from mild-severe and 41.1% experience symptoms of anxiety ranging from mild-severe. Based on the results of the PHQ9 and/or GAD7 these surgeons scored high enough to warrant further follow-up of their depressive/anxiety symptoms.

Breaking down this data a little more, we looked at the providers who scored high enough on the PHQ9 and GAD7 where action should be taken to discuss a treatment plan and begin either pharmacotherapy and/or counselling based on treatment recommendations. Of the 68 providers meeting the criteria for moderate to severe depression based on the PHQ9, only 47% of providers had received a mental health diagnosis. Of the 72 providers meeting the criteria for moderate to severe anxiety based on the GAD7 only 47% have received a mental health diagnosis. This means that a majority of the providers who are not only meeting the criteria to be diagnosed with anxiety and depression, but also scoring high enough to warrant treatment, have not even been diagnosed with the disease yet. How can we begin to help these surgeons get help for a disease they haven't even been told they have yet?

Statistical analysis of the data largely demonstrates that anxiety and depression affect all demographics equally. While differences were found statistically among sex and level of training, the differences were not large enough to have clinical significance.

These illnesses can affect all surgeons, regardless of demographic background. Despite the large numbers of surgeons who are affected by these symptoms, there is still a large stigma surrounding mental health diagnosis. One of the biggest risk factors for suicide is a mental health condition. Our profession cannot change the high levels of anxiety and depression already present in our providers. But two protective factors against suicide are access to mental health care and community support. This is how we can do better.